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1. A method of fabricating a microelectromechanical system, comprising:
providing a substrate having a device layer;
etching a first trench in the device layer, the first trench surrounding a first region of the substrate;
depositing a dielectric isolation layer in the first trench; and
etching a second trench in the device layer, the second trench located in the first region and defining a microstructure.
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2. The method of claim 1 further comprising forming circuitry in a second region of the substrate outside the first region.
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3. The method of claim 2 further comprising depositing an electrical connection over the first trench to connect the microstructure to the circuitry.
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4. The method of claim 1 further comprising depositing a filler material over the isolation layer in the first trench.
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5. The method of claim 1 wherein the isolation layer fills the first trench.
6. The method of claim 1 wherein the substrate further includes a handle layer and a sacrificial layer.
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7. The method of claim 6 wherein the method further comprises removing a portion of the sacrificial layer to release the microstructure.

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8. The method of claim 7 wherein the step of etching the first trench etches through the device layer to expose the sacrificial layer.

9. The method of claim 7 wherein the step of etching the second trench etches through the device layer to expose the sacrificial layer.

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10. The method of claim 6 wherein the sacrificial layer includes silicon dioxide.

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11. The method of claim 1 wherein the device layer includes epitaxial silicon.

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12. The method of claim 1 wherein the isolation layer includes silicon nitride.

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13. A microfabricated device, comprising:
a substrate having a device layer;
an isolation trench extending through the device layer and surrounding a first region of the substrate, the isolation trench including a lining of a dielectric insulative material; and
a plurality of microstructure elements formed from the device layer in the first region and laterally anchored to the isolation trench.

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14. The device of claim 13 wherein the isolation trench further includes a filler material deposited on the lining and filling the trench.

15. The device of claim 13 wherein the lining fills the trench.

5 16. The device of claim 13 further comprising circuitry formed in a second region of the substrate outside the first region.

10 17. The device of claim 16 further comprising an electrical connection disposed over the isolation trench to connect at least one of the microstructure elements to the circuitry.

15 18. The device of claim 13 wherein the substrate further includes a handle layer and a sacrificial layer.

20 19. The device of claim 18 wherein the sacrificial layer includes silicon dioxide.

25 20. The device of claim 18 wherein at least a portion of the sacrificial layer is removed from the first region to form a gap between the microstructure elements and the handle layer.

30 21. The method of claim 13 wherein the device layer includes epitaxial silicon.

22. The method of claim 13 wherein the lining includes silicon nitride.

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